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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,077	03/28/2001	Masakazu Hoashi	MAT-8117US	4032

7590 06/20/2002

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EXAMINER

LE, HOANGANH T

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/820,077

Applicant(s)  
HOASHI et al

Examiner  
HOANGANH LE

Art Unit  
2821



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 11, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

### DETAILED ACTION

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The preliminary amendment filed on July 11, 2001 is acknowledged.

#### *Priority*

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8, and 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-8, what is meant by "grounded antenna and ungrounded antenna"?

In claims 2,5,7,8,13, and 14, the recitation "said ungrounded antenna and said ground are coupled to each other via high-frequency waves" is unclear. How are the

ungrounded antenna and the ground coupled together? Are they capacitively coupled?

In claim 12, "said internal antenna elements" and "the other internal element" have no antecedent basis.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 5-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen (the US Patent No. 6,337,670).

The Chen reference teaches in figure 1 a diversity wireless device for providing diversity using a plurality of ungrounded antennas 20,30,40,50 wherein a ground 29,39,49,59 is placed in proximity to at least one of the ungrounded antennas and the ungrounded antenna is coupled to the ground via "high-frequency waves". The ground is composed of a plurality of laminated layers and is placed so as to partly surround the ungrounded antenna three dimensionally (figure 1).

Regarding claim 6, it has been held that the recitation that an element is "is structured so as to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

8. Claims 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu (the US Patent No. 6,222,496).

The Liu reference teaches in figure 2 a wireless terminal unit having an antenna element, the antenna element including: a substrate 240 ; a first conductor section 210 substantially in parallel to the substrate 240; and a second conductor section 230 successively formed from the first conductor section and angularly arranged relative to the substrate. The first conductor section has a feed terminal; and the second conductor section is structured so as to be inclined in the direction away from the feed terminal, the inclination being such that the space between the second conductor section and the substrate reduces in the direction away from the feed terminal (figure 2).

9. Claims 1-11, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by McKivergan (the US patent No. 6,339,402).

The McKivergan reference teaches in figure 2 a diversity wireless device for providing diversity using a plurality of antennas comprising: a substrate 12; at least one "grounded antenna" 44 disposed on the substrate; at least one "ungrounded antenna" 24 disposed on the substrate and isolated from the grounded antenna, whereby the grounded antenna and the ungrounded antenna provide a diversity gain relative to signals received by the diversity wireless device. A ground 14 is placed in proximity to the ungrounded antenna and the ungrounded antenna is coupled to the ground via "high-frequency waves". The antenna including: a substrate; a first conductor section substantially in parallel to the substrate; and a second conductor section successively formed from the first conductor section and angularly arranged relative to the substrate (figures 6 and 7). The first conductor section has a feed terminal 34 ; and the second conductor section is structured so as to be inclined in the direction away from the feed terminal, the inclination being such that the space between the second conductor section and the substrate reduces in the direction away from the feed terminal (figures 6 and 7). The unit is structured to have two the antenna elements 24,44 and provide diversity using the two antenna elements, and the elements are configured substantially laterally symmetrical with respect to a longitudinal axis of the unit (figure 6).

Regarding claims 3,4, and 6, it has been held that the recitation that an element is "is structured so as to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

*Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKivergan (cited above) in view of Muramoto et al (the US patent No. 6,326,924).

The McKivergan reference teaches every feature of the claimed invention, excluding a switch for connecting to an external antenna.

The Muramoto et al reference teaches in figures 10 two internal antennas 3a,3b and an external antenna 2. Figure 5 shows a switch 5 for connecting to the external antenna 2 in order to improve the characteristics of the antenna.

Since one of ordinary skill in the art would recognize the benefit of improving the

characteristics of the antenna, it would have been obvious to provide Mckivergan with a switch and an external antenna as taught by Muramoto et al.

### *Correspondence*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Hoanganh Le whose telephone number is (703) 308-4921.

13. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

14. Papers related to Technology Center 2800 applications **only** may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 308-7722 or (703) 308-7724.

*Hoanganh Le*  
Primary Examiner  
Art Unit 2821  
June 17, 2002

  
Hoanganh Le  
Primary Examiner